

EOS/MODIS Budget Status & Science Team Recompetition



Michael D. King

Outline

- ❑ FY00 budget summary
 - Summary of NASA Appropriations
 - Line items, earmarks & challenges
- ❑ MODIS budgets
 - FY00 status
 - Plans for recompetition

FY00 Budget Summary



- ❑ **House of Representatives and Senate approved Appropriations Conference Committee bill that funds VA, HUD, and Independent Agencies (including NASA)**
 - President Clinton signed appropriations bill on October 20
- ❑ **NASA Appropriation**
 - \$13,653 B total appropriations
 - » \$1,455 B appropriations for Earth Science(\$3.9 M below President Clinton's request)
 - \$663.2 M for EOS
 - \$231.5 M for EOSDIS
 - \$420.2 M for applied research & data analysis (includes research & analysis, EOS calibration & validation, and IDS investigations)
 - » \$36.3 M for earmarks
 - Research centers at eight universities for natural resource training & remote sensing applications
 - Support of biodiversity programs at two museums
 - Support of reuse of EOSDIS Core System
 - Space-based research initiative for the study & detection of forest fires

FY00 Budget Summary



❑ Items of Congressional interest

- Triana
 - » Preserved in appropriations bill, but NASA is directed to suspend all work on the development of the satellite until the National Academy of Sciences has completed an evaluation of the scientific goals of the Triana mission
 - » Launch no earlier than January 2001 (post-election)
- UAVs
 - » NASA to develop a five-year plan detailing a robust program for utilization of unmanned aerial vehicles in the Earth Science program
- EOS Second Series
 - » NASA to submit a report to Congress by March 15, 2000 articulating the EOS-II strategy for Earth Science through fiscal year 2010
- \$31 M to EOSDIS Core System (planned adjustment)
- \$5.7 M reduction in algorithm budget
 - » Planned realignment between algorithm budget and data analysis budget for Jason and SeaWinds

EOS Science Research



❑ EOS Instrument Science Teams

- Define scientific requirements for each instrument
- Obtain observations of key Earth system processes
- Generate algorithms for data products from EOS instruments
- Develop code for
 - » level-1b calibrated and geolocated radiances
 - » level-2 geophysical data products
 - » level-3 spatially and temporally averaged, reduced volume processing
- Develop new data products and establish their utility for global change studies
- Validate data products under a wide variety of conditions

Calibration & Validation Responsibilities



❑ Calibration

- Support of EOS sensor development and characterization
 - » transfer radiometers
 - » round-robin calibrations
 - » lunar characterization
 - » calibration workshops at NIST
 - » laboratory calibration facilities for validation instrumentation

❑ Validation

- Pre-launch and post-launch activities
 - » airborne simulators (MISR, MOPITT, ASTER, MODIS, TES)
 - » HITRAN database support
 - » AERONET ground-based sun/sky radiometers
 - » MOBY ground-based optical buoy system field experiment support
 - » correlative measurement program
 - » science team validation activities

Science Team Budget Summary



❑ MODIS Science Team

- Algorithm budget (UPN 229)
 - » Decrease of \$312 K
- Validation budget
 - » MOBY, MAS, MODIS science team
 - » Increase of \$936 K

❑ Contracts for science team

- Extend through December 31, 2001
- Beginning in FY01, science budgets will be split between four categories
 - » Algorithm development
 - » Instrument operations support
 - » Data analysis
 - » Calibration & validation
- Algorithm development & instrument operations will continue for length of mission (contracts)
- Data analysis, calibration, & validation will be competed through NRAs on a 3 year cycle

Algorithm Budget Strategy



❑ Algorithm Development (UPN 229)

- This is the basic contract work to develop the initial set of at-launch algorithms
- The time frame for this would be through development up to one year or so after launch
- Long-term maintenance of algorithms at a scaled-back level should separately be estimated
- Extended development and testing of post-launch algorithms should also be specified, as appropriate

❑ Instrument Operations Support (UPN 229)

- This element is to ensure the integrity of instrument operations (including level-1 processing)
- The time frame for this would be around launch through some set period of instrument life
- This would be at a much smaller level than above
 - » Level-1b analysis and trending is the responsibility of the science team (UPN 229), but many instrument support terminals and personnel to track instrument performance should be funded through EOSDIS and should not be included in UPN 229

Algorithm Budget Strategy



❑ Data Analysis (UPN 621)

- This is considered use of data to produce science results, the processing and reprocessing of science data, and special requests for augmented science data processing
- This would be the part of the science that is done through NRAs and is recomputed every three years
- The time frame for this involves issuing an NRA shortly before launch and continuing for about six years (i.e., 2 NRA cycles) after launch

❑ Calibration/Validation (UPN 621)

- This would be for pre-launch and post-launch calibration and/or validation activities required by the instrument team to assess validity of the derived data products
- These should be specified under UPN 291, and are subject to periodic recompetition through NRAs